

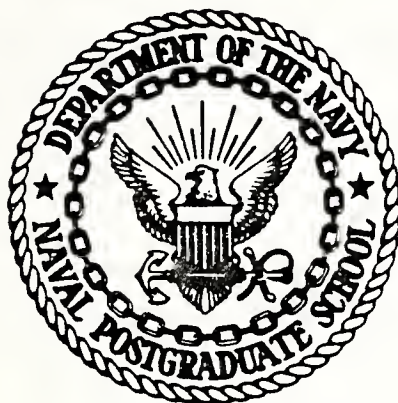
THE ACQUISITION OF AIRLIFT SERVICES
FROM COMMERCIAL SOURCES:
A REVISED METHOD

John Conrad Pathwick-Paszyc

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THESIS

THE ACQUISITION OF AIRLIFT SERVICES
FROM COMMERCIAL SOURCES:
A REVISED METHOD

by

John Conrad Pathwick-Paszyc

December 1979

Thesis Advisor:

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

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1. REPORT NUMBER		2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) The Acquisition of Airlift Services From Commercial Sources: A Revised Method			5. TYPE OF REPORT & PERIOD COVERED Master's Thesis; December 1979
			6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) John Conrad Pathwick-Paszyc			8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Postgraduate School Monterey, California 93940			10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Postgraduate School Monterey, California 93940			12. REPORT DATE December 1979
			13. NUMBER OF PAGES 89
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) Naval Postgraduate School Monterey, California 93940			15. SECURITY CLASS. (of this report) UNCLASSIFIED
			15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.			
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)			
18. SUPPLEMENTARY NOTES			
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) CRAF Civil Reserve Air Fleet Commercial Airlift Acquisition			
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Since the early 1960's, the Military Airlift Command has used the award of Department of Defense airlift service contracts as an incentive to encourage commercial air carriers to commit aircraft to the mobilization base embodied in the Civil Reserve Air Fleet (CRAF) program. Contracts are made in proportion to each carrier's commitment to CRAF. To price the airlift service			

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The Acquisition of Airlift Services from Commercial Sources:
A Revised Method

by

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Lieutenant, Supply Corps, United States Navy
B.A., University of California, Santa Barbara, 1969

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
December 1979

ABSTRACT

Since the early 1960's, the Military Airlift Command has used the award of Department of Defense airlift service contracts as an incentive to encourage commercial air carriers to commit aircraft to the mobilization base embodied in the Civil Reserve Air Fleet (CRAF) program. Contracts are made in proportion to each carrier's commitment to CRAF. To price the airlift service contracts, the Military Airlift Command uses minimum rates it establishes especially for these contracts. This approach is in dissonance with the underlying philosophy of recent legislation deregulating the airline industry and current Department of Defense acquisition policy. This thesis develops a means for introducing price competition into the contract award process consistent with the maintenance of a responsive airlift mobilization base.

TABLE OF CONTENTS

I.	INTRODUCTION -----	9
	A. BACKGROUND -----	9
	B. STATEMENT OF THE PROBLEM -----	11
	C. THESIS INTENT -----	12
	D. METHODOLOGY -----	12
	E. CONTENTS -----	13
II.	THE CIVILIAN-MILITARY PARTNERSHIP FOR AIRLIFT -----	15
	A. HISTORICAL PERSPECTIVES -----	15
	B. EVOLUTION OF THE CIVIL RESERVE AIR FLEET PROGRAM -----	16
	C. THE CIVIL AERONAUTICS BOARD AND THE CIVILIAN-MILITARY PARTNERSHIP -----	23
III.	THE CIVIL RESERVE AIR FLEET: COMPOSITION, REQUIREMENTS, AND CAPABILITIES -----	31
IV.	THE ACQUISITION OF COMMERCIAL AIRLIFT -----	41
	A. BACKGROUND -----	41
	B. THE INDUSTRY'S PORTION OF DEFENSE DEPART- MENT AIRLIFT TRAFFIC -----	42
	C. THE COMMERCIAL AIRLIFT ACQUISITION PROCESS -----	49
	1. Airlift Service Award Evaluation -----	52
	2. The Mobilization Base Index -----	53
	D. AN ASSESSMENT OF THE CURRENT AIRLIFT ACQUISITION PROGRAM -----	55
V.	A PROPOSAL TO INTRODUCE PRICE COMPETITION INTO THE ACQUISITION OF COMMERCIAL AIRLIFT -----	60
	A. ASSUMPTIONS -----	61
	B. THE REVISED AWARD STRUCTURE -----	61

C. DISCUSSION -----	65
VI. CONCLUSIONS -----	68
APPENDIX A: SCHEDULE OF UNIFORM RATES AND RULES FOR FY80 COMMERCIAL AUGMENTATION -----	72
APPENDIX B: MEMORANDUM OF UNDERSTANDING -----	80
LIST OF REFERENCES -----	85
BIBLIOGRAPHY -----	87
INITIAL DISTRIBUTION LIST -----	89

LIST OF FIGURES

1.	Total Strategic Ton-Mile Capability -----	32
2.	MAC International Civil Airlift Procurement FY1960 - FY 1976 -----	46
3.	MAC Domestic Civil Airlift Procurement FY1969 - FY 1979 -----	47
4.	International Airlift Dollar Volume-- Fixed-Buy and Expansion Airlift Services-----	51

LIST OF TABLES

I.	Carriers Participating in CRAF Fiscal Year 1979 Contracts -----	35
II.	CRAF Requirements (B-747 Equivalent Aircraft)----	37
III.	CRAF International Capability -----	37
IV.	Summary of DoD Channel Traffic FY1960 - FY 1978--	44
V.	Aircraft Mobilization Values -----	56

I. INTRODUCTION

A. BACKGROUND

Since the early Sixties, this Nation's conventional defense strategy has been based on a reduced U. S. military presence abroad. Central to this strategy is the reliance on airlift resources to provide a dependable capability to rapidly deliver fighting forces and equipment to any real or threatened conflict area anywhere in the world. The consensus among military strategists is that this capability to deploy large-scale reinforcements by air in response to a broad range of situations in almost any location has effectively multiplied the deterrent effect of all U. S. forces.

To support this strategy and to be able to respond to any world-wide contingency, the Department of Defense (DoD) possesses in its organic inventory an all-jet transport force managed by the Military Airlift Command (MAC). Currently that force consists of 77 Galaxy C-5A and 276 Starlifter C-141 aircraft. [13:9]

In the event of a wartime mobilization, however, it has long been recognized that military resources alone are insufficient to meet total airlift requirements. Moreover, it has been repeatedly determined impractical and too costly to maintain a level of military capability in peacetime sufficient to satisfy wartime requirements. Thus, for over two decades the commercial air carrier industry has augmented

military capability not only in peacetime but also during emergencies. The advantage of civilian augmentation of military airlift is that it can provide an effective supplemental capability at a minimal peacetime cost.

The concept that an effective military airlift system must be based on a partnership between the military and commercial air carriers is embodied in the Civil Reserve Air Fleet (CRAF) program. This program establishes a procedure whereby selected commercial airlift capabilities are identified for commitment to DoD at various stages of national emergencies.

The basic philosophy underlying the CRAF program is that the Nation's commercial certificated air carriers are to carry, under contract to DoD, the majority of routine, channel-type government cargo and passengers in order to permit them to maintain in time of peace a major airlift capability to be available in times of emergency. In recent years, DoD has purchased annually about \$250 million worth of airlift from commercial sources. In fact, about ninety percent of the Defense Department's passenger traffic is carried by civilian contractors. Additionally, civilian air carriers move significant quantities of cargo through the QUICKTRANS/LOGAIR domestic airlift systems. (Refer to Appendix A for definitions.) These contractor operated systems are designed to provide expedited transportation of essential materials in support of Navy and Air Force supply operations.

B. STATEMENT OF THE PROBLEM

The goal of the CRAF program is the maintenance of a responsive, capable airlift mobilization base to augment the organic military fleet to meet the Nation's total war-time needs. Under the CRAF program, the commercial air carriers, by contract with MAC, commit specific aircraft to the reserve air fleet. The extent of this commitment in terms of the numbers, types, and performance characteristics of the aircraft determines the amount of military passenger and cargo traffic MAC allocates among the various carriers participating in the CRAF program.

Price competition has not been a consideration in the airlift contract negotiation and award process because for the past 18 years the level of compensation carriers received from DoD were set by the Civil Aeronautics Board (CAB). Recently, however, the CAB ceased setting minimum rates applicable to air carriage providing airlift services to DoD. As a result, MAC has assumed the function of establishing minimum uniform rates for commercial airlift services for DoD. For Fiscal Year 1980, MAC is continuing to award airlift service contracts in proportion to each carrier's commitment to the mobilization base. This approach, however, is in dissonance with both the competitive philosophy inherent in recent legislation deregulating the airline industry and DoD acquisition policy because it does not incorporate price competition into the contract award process.

In view of this emphasis on competition, the problem that the Military Airlift Command, the agency responsible for the procurement of all DoD commercial airlift service, faces is how it can introduce some form of price competition into the airlift contract award process without jeopardizing the flexibility of the civilian airlift mobilization base that the present acquisition program provides.

C. THESIS INTENT

The intent of this study is to develop and evaluate a revised peacetime airlift acquisition award structure which will not only introduce price competition into the award process but also elicit maximum carrier support for an airlift mobilization base responsive to DoD's needs.

The reader should note that the study was limited by a time constraint and restricted access to research data. Accordingly, certain areas of the study and conclusions may require further consideration.

D. METHODOLOGY

In order to develop a revised contract award structure, an understanding of the existing airlift acquisition program was required. To obtain as much background information as possible about MAC's commercial airlift acquisition program, literature searches and telephone inquiries were conducted.

The research data source used in this study included material available at the Naval Postgraduate School Library and by inter-library loan from the Air University, Maxwell

Air Force Base, Alabama. This material consisted of unclassified manuals and reports prepared by the Air Force, journals, periodicals, books, and Congressional documents. Other material was obtained from the Contract Airlift Division at the Headquarters, Military Airlift Command, Scott Air Force Base, Illinois and the Civil Aeronautics Board. In addition, telephone interviews were conducted with individuals at the Civil Aeronautics Board, the Air Transportation Association of America, the National Air Carriers Association, several air carriers, and Headquarters, United States Air Force, Washington, D.C.

E. CONTENTS

The following chapter examines the civilian-military airlift partnership: the history of commercial airlift support of past military operations, the development and evolution of the Civil Reserve Air Fleet Program, and the past role of the Civil Aeronautics Board in the Defense Department's acquisition of commercial airlift services. Chapter III discusses the organization, operations, requirements, and present capabilities of the Civil Reserve Air Fleet. Chapter IV traces airlift procurement policy since the inception of the CRAF program, details the extent of DoD contracting for commercial airlift services, and reviews DoD's present acquisition program for the acquisition of commercial airlift service. Chapter V introduces an alternative acquisition program which is designed to incorporate price competition into the award

process while simultaneously assuring DoD the ready availability of a capable airlift mobilization base. Finally, Chapter VI summarizes this thesis.

II. THE CIVILIAN-MILITARY PARTNERSHIP FOR AIRLIFT

A. HISTORICAL PERSPECTIVES

The partnership between the military and civilian air carriers had its origins in the early days of World War II. On 13 December 1941, shortly after the official U.S. entry into the war, President Roosevelt authorized the Secretary of War to seize from civilian firms any aircraft necessary to pursue the war effort. The aircraft, in turn, were leased back to their owners. Thus, companies provided the management and operational experience necessary for the efficient conduct of airlift operations. [12:50] Throughout the duration of the war, commercial carriers continued to move large quantities of material and passengers. Under contract to the Army Air Transport Command (ATC) and the Naval Air Transport Service (NATS), commercial carriers delivered more than four billion passenger miles and one million cargo ton-miles and performed more than 1.4 million flying hours for the military overseas and in other international operations. [10:II-I-3]

The civil air industry was again called upon to provide airlift assistance to the military during the Berlin crises. To a large degree, the success of the Berlin Airlift is attributable to the efforts of U.S. airlines, especially the then fledgling supplemental carriers. The Berlin Airlift vividly demonstrated the capabilities of airlift for the massive movement of personnel and cargo on a prolonged basis. U.S.

airlines flew more than 600 transatlantic flights in support of the airlift from June 1948 through May 1949, and operated more than 2,500 flights between West Berlin and points in West Germany. [10:II-I-3]

One year after the Berlin crises, the commercial carriers again responded to the call to augment military airlift forces. During the early stages of the Korean War, civilian airlines under contract to DoD provided the majority of the airlift required to support the war effort. As the Military Air Transportation Service (MATs) increased its operational capability, it assumed a larger role in airlifting personnel and cargo. Nevertheless, commercial airlines transported some 67 percent of the total air traffic, 56 percent of the freight, and 70 percent of the mail airlifted to Korea. [10:II-I-3]

The experiences of World War II, the Berlin crises, and the Korean War clearly indicated to military leaders that contingencies would place requirements on organic military airlift resources far in excess of capability, and some permanent form of commercial airlift augmentation would be required to accommodate the surge of airlift requirements associated with mobilization for future emergencies or wars. Thus, the Civil Reserve Air Fleet (CRAF) program arose out of the realization that military airlift capability could not support the total airlift requirements generated during contingency periods.

B. EVOLUTION OF THE CIVIL RESERVE AIR FLEET

The lessons learned during the 1940's about the contribution that the civil air industry could make in future

military engagements prompted a number of studies to be undertaken in the late 1940's and early 1950's. The first of these studies, released by the Air Coordinating Committee in 1948, recommended the establishment of contractual arrangements between the military and civilian carriers to provide for augmentation in the event the need should arise. Later, the National Security Resources Board (NSRB) commissioned a series of airlift studies for the purpose of designing a mobilization base program and establishing a contractual framework within which the airline industry would respond to national emergencies. The NSRB report recommendations resulted in Executive Order 10219, issued by President Truman in February 1951, which officially established the CRAF program. Responsibility for developing the program rested with both the Department of Commerce and the Department of Defense. DoD's first plan for the establishment of the Civil Reserve Air Fleet was issued on 20 March 1952 the date which marks the beginning of the civilian-military airlift partnership officially .

During the years immediately following the Korean War, numerous studies were performed aimed at reviewing national airlift policies and identifying problems. The consensus found in these studies was that civilian airlift was vital to both the economic and security interests of the U.S. and consequently warranted expansion. As a result, the CRAF program underwent several modifications in its early years to better reflect the economic realities in the commercial air industry and meet changing defense needs.

Soon after the CRAF program came into existence, it was realized that in order for the Government to have a large, modern aircraft fleet at its command during periods of conflict it would be necessary to employ the fleet during peacetime. This requirement was first recognized in recommendations contained in a report entitled "Civil Air Policy" prepared by the Air Coordinating Committee in 1954. The basic points expressed in this study were that DoD should not compete with private civil air carriers, but rather should make attempts to use underutilized civilian airlift capacity especially civil air cargo capability as it became available for routine non-emergency use.

In 1955, the Hoover Commission issued a report which basically reiterated the recommendations contained in the Air Coordinating Committee's report. The Commission concluded that such a policy would on the one hand reduce subsidies to U. S. international air carriers while on the other hand aid in the development of an economically self-sufficient industry capable of providing a vast reservoir of airlift to meet mobilization emergencies.

During the 1955/56 time period, several Congressional committees, noting DoD's increasing reliance on the Military Air Transportation Service (MATs), sought to have DoD define the role of MATs and the civilian air carriers under the CRAF program. Extensive and lengthy investigations were performed by the Committee on Governmental Operations and the Committee on Military Affairs in the House. Their basic finding was that

DoD must make maximum utilization of the civil air carriers to strengthen the industry's economy and in doing so it would be contributing to preparing the civil reserve air fleet to meet wartime needs. Similarly, the House Appropriations Committee, in its deliberations, emphasized the essential role of the scheduled and non-scheduled airlines in overall mobilization and reaffirmed the need for the Air Force in conducting its transportation business to assist these carriers to remain financially sound.

Again in 1958, the Military Operations Subcommittee of the House Government Operations Committee undertook a comprehensive investigation of the entire relationship between DoD and the civil air carriers. The resulting exhaustive report produced by the committee put forth 22 specific recommendations aimed at strengthening overall national airlift capability. Among the recommendations was one that would restrict DoD's use of MATS to strictly moving outsize and special-cargo traffic and technical missions. It was also recommended that the Civil Reserve Air Fleet be expanded and more closely integrated with military airlift missions. By allocating to civil air carriers in CRAF a larger share of DoD's cargo traffic, the reasoning went, the Air Force would be encouraging the civil air carriers to procure modern cargo aircraft.

Yet another detailed investigation into CRAF was conducted in 1960 by the Airlift Subcommittee of the House Armed Services Committee. The ensuing report concluded that DoD's failure to place a greater emphasis on the utilization of civil air

carriers had seriously diminished the Nation's overall airlift industry, the Subcommittee recommended that a new procurement policy be devised which would create a greater incentive for carriers to modernize and expand their cargo fleets.

The civil air carrier's problems were further addressed in a detailed DoD report issued in 1960 entitled "The Role of Military Air Transport Service in Peace and War." This report was produced in response to President Eisenhower's directive to the Secretary of Defense to study the role of MATS in peace and war. In regard to then existing procurement policies and practices the report stated:

Current airlift procurement policies and practices are not accomplishing the desired results in promoting a healthy growth of the United States overseas commercial cargo airlift capability. With Congressional approval, if necessary, they should be better adapted to reflect the long-term interest of the Department of Defense in commercial airlift capability and provide continuity and stability required for effective and economical support of military forces. [3:138]

Further, the report proceeded to state:

Policies and practices should (1) encourage modernization and growth of commercial cargo capability, (2) insure uninterrupted commercial airlift service to the Department of Defense at all times; and require carriers providing augmentation airlift to provide on request during emergencies a fixed percentage increase in airlift capability over their normal commitment to MATS. [3:138]

A number of specific "Presidentially Approved Courses of Action" were enumerated in the report which were to serve as a basis for the implementation of the recommended policies. These included the limitation of MATS operations to strictly "hardcore" traffic and the expanded use of civilian air carriers to move DoD passengers and cargo. To provide greater

incentive for expansion of the civil cargo fleet, the report called for the elimination of competitive bidding for airlift contracts and the substitution of Civil Aeronautics Board (CAB) rate making in the area. Additionally, it proposed the development of a formula by which a carrier's share of military traffic would be determined by such factors as the quantity and relative value of the aircraft committed to CRAF and the willingness of the carrier to acquire modern cargo aircraft.

The DoD study further addressed a serious deficiency in the original CRAF plan. As formulated, the plan called for the total activation of the civil reserve air fleet in general war conditions but it did not deal with a call up in situations short of a general war. This contributed to a reluctance on the part of carriers to commit aircraft to DoD for other than full mobilization because of the possible adverse effects such action might have on a carrier's competitive position within the industry. This restriction was removed in 1963 when the Secretaries of Defense and Commerce signed a Memorandum which clarified and formalized the incremental activation of CRAF under conditions other than full mobilization.

The Secretary of the Air Force convened an independent committee, the Reed Committee, to study the MATS operation and to submit recommendations to the Secretary on implementation of the Presidentially Approved Courses of Action. The resulting report recommended that MATS procurement policies be revised as follows:

1. Procure all transportation at tariff rates approved by the Civil Aeronautics Board.

2. Allocate all business to commercial air carriers as defined in Section 101 (3) of the Federal Aviation Act of 1958 who meet the following prerequisites:

- (a) Are effectively committed to the CRAF program on the basis set forth hereinafter.
- (b) Have placed firm orders for modern cargo aircraft.
- (c) Have a good financial and operational record.
- (d) Owns a fleet of aircraft at the time the requirements for procurement are published.
- (e) Have sufficient crews in the military reserve to meet CRAF commitment.

3. Provided certificated route carriers meet these prerequisites, grant such carriers the right of first refusal to all Department of Defense procured traffic over the certificated route whether on an individual basis or in plane load lots (Air Force to determine whether traffic is to move on an individual basis or in plane load lots) provided further such certificated carriers can satisfy Air Force traffic handling requirements at tariffs negotiated with the Department of Defense and approved by CAB.

4. To the extent to which it appears advantageous to it, the DoD should be authorized to enter into long-term arrangements with carriers for the handling of this traffic at rates to be approved by the CAB. [11:194]

The Department of the Air Force responded to the Presidentially Approved Courses of Action and the Reed Commission report by making two fundamental changes to its airlift acquisition policies. First, the Air Force decided to limit eligibility for participation in annual airlift contracts to carriers who were CAB certificated. Second, the Air Force proceeded to combine its annual peacetime airlift procurement with its standby mobilization contracts. These policies are discussed in more detail in Chapter IV.

The policies outlined by "The Role of MATS in Peace and War" as approved by the President and implemented pursuant to

his direction have been credited with substantially improving the status of the CRAF program. Today, these same policies continue to guide DoD in matters related to the procurement of its commercial airlift needs.

C. THE CIVIL AERONAUTICS BOARD AND THE CIVILIAN-MILITARY PARTNERSHIP

As discussed, the Department of Defense depends heavily on the civil air carriers for enhancing its organic airlift capability during contingency periods. Moreover, this reliance on the private sector is not a new phenomenon but, in fact, has its roots in the Civil Aeronautics Act of 1938. Section 102 of the Federal Aviation Act of 1958, which amended the 1938 Act, requires that the Board, in the discharge of its powers and duties under the Act, consider among other things,

Competition to the extent necessary to assure the sound development of air-transportation systems properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and national defense; [4:731]

This statement of Congressional policy, then, forms the basis for the Board's actions with respect to the civilian-military partnership for airlift.

The Act conferred to the CAB two basic regulatory tools; the power to license carriers to engage in air transportation and the power to regulate rates. With regard to licensing, no carrier can engage in domestic interstate or foreign for-hire air transportation without a Board Certificate of Public Convenience and Necessity, or an exemption for the certificate requirements of the Act.

The Board also has the authority to fix fair and reasonable rates of compensation or reasonable minimum or maximum rates after notice and hearing. In determining and fixing such rates, the Board is required to take into consideration the conditions peculiar to transportation by aircraft and the particular air carriers or class of air carriers. The Board's power over rates is applicable only to domestic service. In contrast, the Board's powers over international overseas air transportation is limited to removing unjust discrimination or undue preference or prejudice. It can neither directly fix rates nor suspend proposed rates.

Discussions between the Board and the Department of Defense concerning rates began in 1958 after several complaints from small airline companies that the then existing competitive bidding system was inherently disadvantageous because it favored the larger carriers. At this time, the Board maintained a non-interventionist stance with regard to Government traffic as it was international in nature and, as such, the Board was without authority to intervene.

After further discussions in 1959, however, the CAB announced a proposal to set minimum rates for military traffic. The method the CAB planned to use to exercise control over rates for military augmentation airlift in foreign air transportation involved conditioning the grants of exemption to carriers requiring them to engage in DoD business. These carriers included the supplemental carriers who did not hold Certificates of Public Convenience and Necessity for foreign air transportation and all cargo carriers whose certificates did not authorize

passenger operations. By granting exemptions only if contract prices met minimum rates, the Board could control the rates of the carriers concerned. The CAB took no action to implement the proposal because of DoD's reluctance to endorse it.

The situation changed in 1960, however, when a revised method of airlift procurement was adopted by MATS. As previously discussed, this involved the substitution of negotiated bids for competitive bidding procedures. Moreover, carriers who were not certificated by the CAB were ineligible for MATS contracts. Finally, contract eligibility was limited to participants in CRAF who met the requirements set out in the Presidentially Approved Courses of Action.

On the basis of this development, the Board announced in June 1960 that it would discontinue issuing blanket certificate exemptions to supplemental carriers. In place of the blanket exemptions, the CAB instituted a procedure whereby individual exemptions were granted on the basis of a carrier's acceptance of prescribed rates, execution of a CRAF contract, and a determination by the Air Force Secretary that contracting for civilian airlift service in a non-competitive manner was in the best interests of national security. In 1961 the Board implemented this policy and established a minimum rate floor. Rates applicable to military transportation were published in Title 14, Part 288 of the Code of Federal Regulations.

The Board's justification for intervening in DoD's procurement of commercial airlift was based on the objective of ensuring

that carriers received sufficient compensation from DoD to maintain and continue to develop an air transport system which would satisfy defense needs. Under the competitive bidding system heretofore in existence, small businesses, including supplemental carriers who depended heavily on military revenues, were essentially forced to enter bids below cost in order to receive DoD contracts. This situation was described in 1961 Congressional testimony by then CAB Chairman Boyd.

The fact is that under the old system of competitive bidding, without a rate floor, many aircraft operators bid at prices that were marginal and were even below their actual cost. This destructive bidding resulted not only in a lack of adequate earnings but also produced very substantial losses for some of the carriers involved.

This is illustrated by the plight of Overseas National Airways which received MATS awards well above \$20 million in the year ended September 30, 1960, and lost \$2,245,000 in performing service under the contract, even though this carrier has always had the reputation of being a low-cost operator.

Even larger losses were experienced by Seaboard World Airlines, which was then known as Seaboard and Western. World Airways also experienced losses, although on a smaller scale. [15:86]

In explaining the reasons for destructive bidding by the industry seeking DoD contracts, Chairman Boyd went on to state:

Finally, for some carriers, it is literally a matter of survival. A number of these carriers are primarily engaged in attempting to maintain their existence in the belief that they will be rewarded as new markets, particularly in air cargo, open up. But these carriers have payrolls and other expenses which have to be met today. They cannot pass up a substantial Government contract even if it means money losses, since it will provide the cash flow necessary to keep the organization intact. If they are able to develop enough additional outside business, the profits will offset the losses and they will break even.

We do not believe that any system which allows some competitors to cut prices to out-of-pocket cost or less is in the long run a healthy one. Reasonable profits are necessary to insure modernization and growth. Very few financial institutions with money to invest will consider the business of furnishing air transportation to the military a reasonable risk.

Moreover, cutthroat competition introduces instability in the market, resulting in extreme fluctuations in the amount of MATS business awarded to any particular carrier from year to year. Under these conditions, unregulated competitive bidding cannot produce an adequate, modern air fleet. [15:86]

Based on the above testimony, it is clear that the minimum rate floor was designed to prevent individual price competition for MATS contracts from driving rates below industry average costs on the theory that lower rates would jeopardize the health of some carriers and, thus, reduce the amount of airlift service available to DoD.

Recent legislation deregulating the airline industry has drastically altered the Board's involvement in military rate making. Public Law 95-163, enacted 7 November 1977, removed the CAB's authority to regulate rates for the movement of cargo within CONUS and eased restrictions on the entry of carriers into the interstate transportation of cargo. Moreover, the law eliminated the Board's powers to suspend and prescribe new cargo rates if it decided that proposed tariffs were "unjust and unreasonable." In the past, a rate was not just or reasonable if it was too profitable or if it did not recover reasonable cost plus return on investment for a carrier. Finally, the Board has interpreted the law as expressly removing the statutory standards underlying the minimum rate structure for QUICKTRANS /LOGAIR services.

The deregulation which Congress initiated in air cargo was substantially expanded with the passage of Public Law 95-504 in October 1978. The law extended deregulation to include all overseas international and interstate air transportation. The legislation places considerable emphasis upon free market forces and competition to produce within the air industry efficiency, innovation, lower prices, a variety of price/service options, and allow efficient, well managed carriers to earn reasonable profits and attract capital.

In response to the legislation, the CAB performed a review of its military rate making function under Part 288 and in January 1979 issued a Notice of Proposed Rule Making announcing its intention to eliminate the minimum rate provisions applicable to military airlift services provided by civilian air carriers. The Board cited a number of reasons for the proposed action:

First, changes in the economic circumstances of the air charter industry appear to have eliminated any need to protect charter air carriers from competition through the regulation of military rates. The protection of supplemental carriers was in large part the justification for the adoption of Part 288 in 1961. Second, our experience with Part 288 has led us to question whether the regulation of current military air transportation prices is an efficient way to supply DoD with both current air transportation and commitments to CRAF. Third, in a series of recent statutory changes, Congress has clearly signalled its intention to place maximum possible reliance upon competitive market forces for the attainment of satisfactory service and price levels in air transportation. [2:2]

In elaborating on the second reason for its proposal, the CAB stated that since established rates were not compensatory for CRAF commitments in the long-term but only covered

costs for air transportation provided in the current-term, Part 288 did not give carriers an incentive to acquire and commit aircraft to meet DoD's emergency needs. [2:7] Moreover, the CAB opined that in a competitive market environment, direct contractual agreements between DoD and the air carriers could provide both a military transportation system and a reserve fleet more efficiently than the present system. [2:8]

On 19 July 1979, the CAB issued its final ruling revoking the provisions of its Economic Regulations prescribing minimum rates applicable to domestic and international charter service and international individually waybilled or ticketed scheduled service provided for the Defense Department pursuant to contract. The ruling restated the Board's position that minimum rate regulation represented by Part 288 was contrary to the statutory mandates expressed in the air transportation deregulation bills. [1:2] The Board also stated that by eliminating the minimum rate structure, it was removing "an unnecessary regulatory barrier preventing the carriers from negotiating directly and expeditiously with DoD to determine the reasonable price to be paid for their services." [1:4]

In the absence of established rates for pricing airlift services, the Military Airlift Command has assumed the Board's rate making functions. The basis for MAC's rate making method is a Memorandum of Understanding (MOU) entered into by MAC and each carrier desiring to provide domestic and international contract service. [See Appendix B.] Under the MOU, carriers interested in providing airlift service to DoD and willing to

participate in the mobilization base program agree to provide cost information to MAC. This cost information is applied to a CAB rate making methodology to establish a MAC uniform negotiated rate with which to price commercial airlift contracts. In the event that MAC and the carriers are unable to resolve disagreements arising during the process of negotiation, the MOU states that issues are to be referred to no lower a level than the Assistant Secretary of the Air Force for final resolution. Appeneix A is the proposed "MAC Schedule of Negotiated Uniform Rates and Rules" which is intended to replace Part 288 of the CAB Economic Regulations.

III. THE CIVIL RESERVE AIR FLEET: COMPOSITION, REQUIREMENTS, AND CAPABILITIES

As previously discussed, military organic airlift resources have been complemented for many years by the resources of the Civil Reserve Air Fleet. These CRAF resources, moreover, have contributed substantially to national strategic airlift capability. Currently, CRAF accounts for over one-half the total strategic airlift capability available to the U.S. in the event of national emergency or war. [13:20]

The relative contributions of both civilian and military resources to total airlift capability is illustrated in Figure 1. Peacetime military organic capability is based on a utilization rate of about two hours per day for C-5 aircraft and three hours per day for C-141 aircraft. The crises military organic capability is predicated on wartime surge utilization rates of 12.5 hours daily per aircraft. The CRAF cargo and passenger capabilities represent airlift capabilities generated by total CRAF activation at a contractually specified utilization rate of 10 hours daily per aircraft. Finally, the national passenger capability includes civil long-range passenger capability which is not committed to CRAF.

Depending on aircraft operating characteristics, allocation of aircraft within CRAF is made to one of four segments which are basically geographic in nature. Accordingly, aircraft are assigned either to the Long-Range International (LRI),

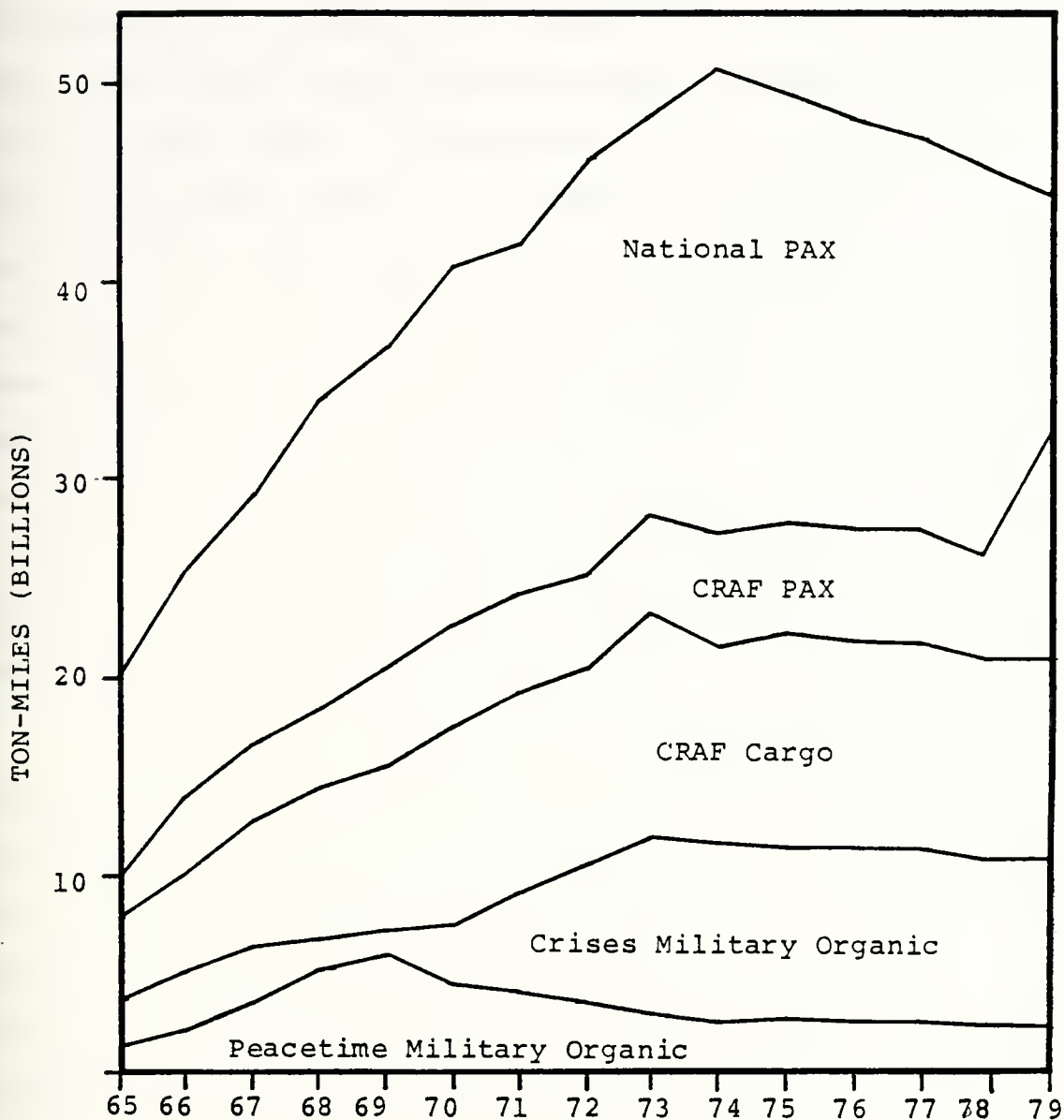


Figure 1. Total Strategic Ton-Mile Capability
(Billions/Year)

Source: Headquarters, Military Airlift Command [5]

Short-Range International (SRI), Domestic, or Alaskan portions of the program.

Since the major objective of CRAF is to augment MAC's strategic airlift capability, satisfying requirements for the Long-Range International segment receives primary emphasis. Those aircraft capable of providing airlift in support of MAC's world-wide mission requirements include Boeing B-747's and 707's, Lockheed L-1011's, and McDonnell Douglas DC-8's and DC-10's. These aircraft are all capable of extended over-water operations and can transport a productive payload over the desired 3500 nautical mile (NM) range. Due to the current shortage of cargo capable aircraft, however, all cargo-capable aircraft with a 2300 NM productive range--the distance from the West Coast to Hawaii--are accepted in the long-range fleet. Thus, Boeing B-727QC's are also included in this segment.

When activated, CRAF's Short-Range International segment supports MAC's intra-theater cargo and passenger airlift requirements. In addition, this segment also accommodates short-haul operations between CONUS and reasonably close offshore locations such as the Caribbean, Greenland, and Iceland. The SRI fleet is composed entirely of convertible B-727's. These aircraft have a 1500 NM productive range.

The Domestic segment provides the Navy and Air Force with separate, scheduled cargo airlift systems connecting various military installations, supply depots, and commercial airfields within CONUS. The QUICKTRANS system is a contractor operated air logistics pipeline designed to satisfy the Navy's requirements for the expeditious movement of urgent, high-priority

material. LOGAIR, the equivalent Air Force air logistics system, similarly relies on commercial carriers under contract to provide expedited transportation for essential materials. The Domestic requirements are served by a combination fleet of B-727's, DC-9's, L-188's, and L-100's.

Finally, the Alaskan segment of CRAF satisfies intra-Alaskan airlift requirements of the Alaskan Air Command and Distant Early Warning radar site support for the Aerospace Defense Command. It is composed of jet, turboprop, and piston-powered aircraft suitable for shortfield operations in locations without extensive ground support.

Currently, there are twenty-one carriers participating in the CRAF program under mobilization base contracts. Table I lists these carriers according to CRAF segment and shows the number of aircraft each carrier has committed to CRAF by stage.

Under the provisions of CRAF contracts, carriers are bound to respond to progressively increasing requirements in three stages of emergency. The specific number of aircraft committed to each stage of CRAF activation is contractually stipulated.

The stages are:

- ° Stage I - Within 24 hours of a declaration of the requirement for these assets by the Commander in Chief, Military Airlift Command (CINCMAC), carriers must make committed aircraft available for service. This stage is basically an extension of commercial service already available to MAC. It involves LRI identified aircraft only.
- ° Stage II - Within 24 hours of call up by the Secretary of Defense for emergencies not requiring full mobilization, aircraft committed to this stage must be made available for service. When this stage is activated, not only are aircraft assigned to LRI

TABLE I

CARRIERS PARTICIPATING IN CRAF FISCAL YEAR 1979 CONTRACTS

Carrier	Large/Small Business	Type	Aircraft Committed to CRAF I	II	by Stage III
<u>LONG-RANGE INTERNATIONAL</u>					
Airlift International	S	all cargo	6	9	10
American Airlines <u>l/</u>	L	trunk	-	-	44
Braniff International	L	"	1	1	17
Capitol Airlines	S	charter	1	2	8
Continental Airlines <u>l/</u>	L	trunk	-		15
Evergreen International	S	charter	1	1	1
The Flying Tiger Line	L	all cargo	12	23	24
Northwest Airlines	L	trunk	7	14	44
Pan American Airlines	L	"	4	6	76
Seaboard World Airlines	L	all cargo	2	6	6
Trans International	L	charter	8	14	15
Trans World Airlines <u>l/</u>	L	trunk	-	-	55
United Airlines <u>l/</u>	L	"	-	-	44
Western Airlines <u>l/</u>	L	"	-	-	14
World Airways	L	charter	10	15	18
<u>SHORT-RANGE INTERNATIONAL</u>					
Alaska Airlines <u>l/</u>	S	Alaskan	-	-	2
Eastern Airlines <u>l/</u>	L	trunk	-	-	23
<u>DOMESTIC</u>					
Evergreen International	S	charter	-	-	3
Hawaiian Airlines	S	Hawaiian	-	9	9
Trans International	L	charter	-	21	21
Zantop International	S	charter	-	8	8
<u>ALASKAN</u>					
Reeve Aleutian Airlines	S	Alaskan	-	-	3
Wien Consolidated	S	Alaskan	-	-	5

l/ Call Contracts (a type of contract which commits the contractor to provide airlift services as determined by MAC)

Source: Headquarters, Military Airlift Command [8:1,2]



and SRI CRAF segments involved, but also some aircraft committed to the Domestic and Alaskan Service segments.

- ° Stage III - Within 48 hours of activation of this stage, all CRAF resources must be provided to DoD. This stage is activated by order of the Secretary of Defense in time of war or during an unlimited national or civil defense emergency declared by the President or Congress.

CRAF requirements are based on contingency plans established by the Joint Chiefs of Staff (JCS). Under JCS operational concepts, strategic airlift forces are tailored to meet specific requirements and varying contingencies around the world. It is these requirements that fix the composition of CRAF. The specific types and numbers of aircraft required to support JCS approved contingency plans are determined by MAC and forwarded to the Director, Office of Emergency Transportation (OET), Department of Transportation (DOT) who, in turn, allocates the aircraft to CRAF by Federal Aviation Administration (FAA) registration number.

The requirements that must be satisfied in each of the three stages of CRAF activation are set forth in Table II. These requirements are expressed in B-747 equivalents. Note that since the requirement for cargo capability at Stage III exceeds the total existing available capability, all cargo aircraft offered are accepted.

These requirements, in turn, are satisfied by a variety of aircraft types in the inventories of airlines participating in the CRAF program. Table III shows the international CRAF capability by aircraft configuration and type committed to

TABLE II
CRAF Requirements (B-747 Equivalent Aircraft)

	Stage I	Stage II	Stage III
Cargo	20	33	All <u>1/</u>
Passenger	18	27	189 <u>2/</u>

1/ 118 required; 75 offered

2/ 96 percent wide-bodied passenger aircraft;
4 percent narrow-bodied aircraft

Source: Headquarters, Military Airlift Command [5]

TABLE III
CRAF International Capability

	I	STAGES II	III
<u>Aircraft</u>			
<u>Passenger:</u>			
B-707	1	1	92
DC-8	-	-	13
B-747	5	11	97 <u>1/</u>
L-1011	-	-	6
DC-10	2	4	51
TOTALS	8	16	259
<u>Convertible/ Cargo:</u>			
B-727QC	-	-	45
B-707	-	-	9
DC-8	26	50	67
B-747	13	16	23
DC-10	6	9	18
TOTALS	45	75	162

1/ 26 potential bulk cargo;
capability 3.7 MTM/day

Source: Headquarters, Military Airlift Command [5]

each of the three stages of CRAF. The total capability these aircraft represent to Stage III is 144.4 million passenger-miles and 15.3 million ton-miles per day.

While the combination of military and CRAF resources constitutes a tremendous strategic airlift capability, continuing studies indicate that this capability is inadequate to satisfy established contingency requirements. Moreover, national strategic airlift capability is particularly deficient in total cargo transportation capability. A contributing factor has been the Defense Department's doubling of the projected strategic airlift requirement from 180,000 to 370,000 tons of cargo to Europe in 30 days. [16:2557]

Today, CRAF's cargo capability is insufficient to satisfy the requirements levied upon it. Of the 376 long-range aircraft in CRAF, only 143 are cargo capable. The shortfall is most severe in CRAF's ability to transport oversize and outsize cargo. Outsize cargo includes equipment and material that is too large to be loaded on standard military airfreight pallets but can be carried aboard organic military transports or wide-bodied CRAF aircraft such as the DC-10 or B-747. The five-ton truck is an example of oversize cargo. Larger equipment, e.g. tanks and self-propelled guns, is classified as outsize. The C-5 is the only aircraft capable of transporting outsize equipment. Currently, the majority of CRAF aircraft are of narrow-body design capable only of transporting bulk cargo, i.e. equipment and material which can be loaded on airfreight pallets. There are only a limited number of wide-bodied CRAF aircraft available to move oversize cargo for DoD.

A number of airlift enhancement programs have been proposed by the Air Force to increase strategic airlift capability. These include (1) C-5 wing modification, (2) C-141 "stretch," (3) procurement of advanced tanker/cargo aircraft, and (4) CRAF modification. The CRAF modification plan was developed by the Air Force in 1974 as a means of significantly increasing strategic cargo capability. Under the plan, about 110 commercial wide-bodied jet aircraft, such as the B-747, DC-10, and L-1011, would be modified to incorporate cargo convertibility features. Additionally, the Air Force would defray the added operating costs and revenues lost due to the reduced payloads of modified aircraft, and revenues lost by the carriers during the period aircraft were undergoing modification. For a total ten year outlay of between \$450 million to \$600 million in 1978 dollars, it was estimated that CRAF oversize capability would increase threefold. [14:48]

In 1977, the CRAF modification plan was revived with the introduction of H.R. 2637 into Congress. This legislation would have authorized the Secretary of the Air Force to establish a program to encourage civilian air carriers to acquire additional cargo capability in either their existing or future fleets. In general, the bill would have authorized limited federal financial support for (1) purchase of new cargo planes or passenger aircraft with cargo convertible features, i.e. large cargo doors and reinforced flooring, and (2) the installation of similar features in existing passenger aircraft. Moreover, the bill would have given the Secretary of the Air Force

the authority to enter into long-term contractual agreements providing funds for annual payments to compensate carriers for the additional operating costs and reduced payloads associated with aircraft modifications.

Aircraft purchased or modified under the program would not be allowed to share as cargo aircraft in the annual distribution of MAC contracts. The legislation, however, offered annual payments to carriers who were not sharing in DoD's peacetime airlift business as an incentive to commit aircraft to Stage III.

While the House of Representatives passed authorizing legislation, the Senate did not act on the measure. Instead, Congress appropriated \$7.5 million in fiscal year 1979 to fund a demonstration program involving modification of one aircraft. In its fiscal year 1980 budget, DoD proposed modification of nine new aircraft. Eventually, DoD hopes to modify sufficient aircraft to equal the capacity of 65 B-747's. [13:33]

The CRAF modification program offers an extremely cost effective approach to increasing airlift capacity. Once the cargo features have been installed and compensation and incentive payments made to participating carriers, the modification program imposes no additional operational and maintenance costs on the Government.

IV. THE ACQUISITION OF COMMERCIAL AIRLIFT

A. BACKGROUND

During the Fifties, the Military Airlift Command's annual commercial airlift contracts were entirely separate from CRAF mobilization base contracts. Moreover, MAC contracted for commercial services with both regulated and unregulated carriers who competitively bid for military airlift business. Carrier participation in the CRAF program was not requisite for eligibility to bid and no preference was given to carriers committed to CRAF in the award of contracts. The CRAF contracts took the form of cost-plus-fixed-fee standby contracts under which DoD could only call for service on a full mobilization basis.

In 1956 and 1957, DoD shifted to a system of call contracts to obtain the greater part of its commercial airlift augmentation. These contracts set forth the general provisions and operating conditions which would apply if DoD purchased airlift services from the contractor and committed neither DoD to offer the service nor the carrier to provide the service. As requirements arose, carriers were invited to submit bids for the business. Carriers with the lowest cost offers received the contract awards.

Beginning in 1958, however, the Defense Department began procuring more of its airlift on a firm six-month or twelve-month contractual basis. Companies on bidders lists were

advised of the requirements to fill the fixed contracts and invited to submit bids under which they would perform some or all of the service. Separate expansion service contracts were awarded to accommodate requirements in excess of the fixed buy.

As discussed earlier, the Civil Aeronautics Board viewed these procurement practices as detrimental to the financial health of some air carriers who were given to destructive bidding practices in an attempt to acquire DoD contracts. Likewise, DoD concluded that these procurement practices contributed to an airlift augmentation system that was unresponsive to its needs.

Present acquisition policy continues to reflect the guidelines set down by the President and the Congress in the early 1960's. Today, CRAF carriers continue to be contractually committed to participate in the incremental activation of CRAF through an acquisition process which combines the annual procurement of commercial airlift from civilian firms with the CRAF mobilization base contracts.

B. THE INDUSTRY'S PORTION OF DEFENSE DEPARTMENT AIRLIFT TRAFFIC

Since the Department of Defense is the civil air carrier's single largest customer, the amount of business it annually offers has considerable importance to the industry. In fiscal year 1968, the peak year for commercial airlift procurement, DoD contracts provided almost ten percent of the industry's revenues for that year. In the post-Vietnam years,

however, DoD's commercial airlift contracts have declined to a point where they currently represent about one percent of the industry's total revenues.

Table IV summarizes DoD channel cargo and passenger movement internationally by civil air carriers since 1960. Beginning in 1966, civil air carriers have regularly received over 80 percent of DoD's international passenger traffic business. In contrast, the percentage of DoD cargo transported by civil air carriers has never achieved such proportions. The civil air carrier's share of international military cargo reached a peak in 1962 when they carried 48.7 percent of the total. In the Vietnam era that followed, the total volume of military cargo increased substantially, but the percentage handled by CRAF carriers dropped. In fiscal year 1967, commercial air carriers flew a peak of 1,173,990 ton-miles or 38.8 percent of the total military cargo airlifted that year. In 1969, however, this trend reversed and the amount of DoD cargo moved internationally by civil air carriers plunged.

The reduction in the cargo tonnage moved and to a lesser extent the smaller number of military passengers moved by civil air carriers is, of course, partly attributable to the end of the Vietnam War. This, however, is not the entire reason. The reduction has also been caused by the decline in the number of troops stationed overseas. Additionally, the escalating cost of airlift has prompted use of lower cost surface transportation by DoD components. Finally, concurrent with DoD's declining airlift requirements to support the Vietnam War, MAC's organic

TABLE IV

Summary of DoD Channel Traffic
FY 1960 - FY 1978

Fiscal Year	Cargo TM (000)		Passenger Miles (000)		% Moved Commercially	
	Total	Commercial	Total	Commercial	Cargo	Passengers
1960	553,727	68,971	3,523,923	1,710,360	12.5%	48.5%
1961	524,184	100,809	3,508,425	1,626,453	19.2	46.4
1962	613,981	298,940	3,481,569	2,103,858	48.7	60.4
1963	667,063	283,340	4,144,986	2,803,500	42.5	67.6
1964	725,976	189,595	4,120,623	2,994,246	26.1	72.7
1965	959,153	341,603	4,362,651	3,417,003	35.6	78.3
1966	1,482,423	584,872	7,066,377	6,360,174	39.5	90.0
1967	3,024,430	1,173,990	9,933,552	9,101,358	38.8	91.6
1968	3,737,854	1,013,380	13,622,391	12,694,329	27.1	93.2
1969	3,830,368	862,780	14,683,824	13,992,822	22.5	95.3
1970	3,235,157	541,583	14,368,077	13,486,464	16.7	93.9
1971	2,457,770	237,916	12,064,275	11,351,898	9.7	94.1
1972	2,336,691	732,345	8,462,061	7,845,813	31.8	92.7
1973	2,040,564	409,337	5,664,537	4,900,041	20.1	86.5
1974	1,185,573	114,761	4,344,858	3,869,100	9.7	89.1
1975	1,047,632	63,662	4,129,209	3,648,096	6.1	88.3
1976	983,261	46,051	3,838,239	3,283,470	4.7	88.5
1977 L/	1,189,372	51,946	4,645,314	4,096,746	4.4	88.2
1978	905,400	126,313	3,436,011	2,917,872	13.9	84.9

L/ Includes fiscal year 7T.

Source: Headquarters, Military Airlift Command [9]

airlift capability was drastically expanded with the addition of the C-5 aircraft to the MAC fleet.

The effect of these events on the level of MAC's international civil airlift procurement is clearly evident in Figure 2. In fiscal year 1967, the peak year for DoD commercial airlift procurement, \$594.5 million was expended for international airlift. More recently, the level of DoD business awarded to civil air carriers for long-range international airlift services has stabilized at about \$200 million annually. In contrast, as depicted in Figure 3, the total level of contracting for domestic airlift has remained relatively constant since 1969.

This precipitous decline in post-Vietnam international airlift procurement has produced a dilemma. On the one hand, procurement of airlift services from the commercial sector is intended to encourage carriers to improve and expand their airlift resources. On the other hand, military organic airlift capability has substantially increased. As a result, very little overseas cargo business is offered civil air carriers because, even at the low utilization rates of C-5 and C-141 aircraft necessary to maintain military readiness, most of the cargo movement DoD requires can be accommodated by these MAC assets. Thus, DoD has primarily contracted with the commercial carriers for passenger services.

The air carriers have contended that the DoD passenger traffic alone is insufficient to maintain and expand airlift capacity necessary to augment military resources in contingencies and a larger share of DoD's international peacetime cargo traffic

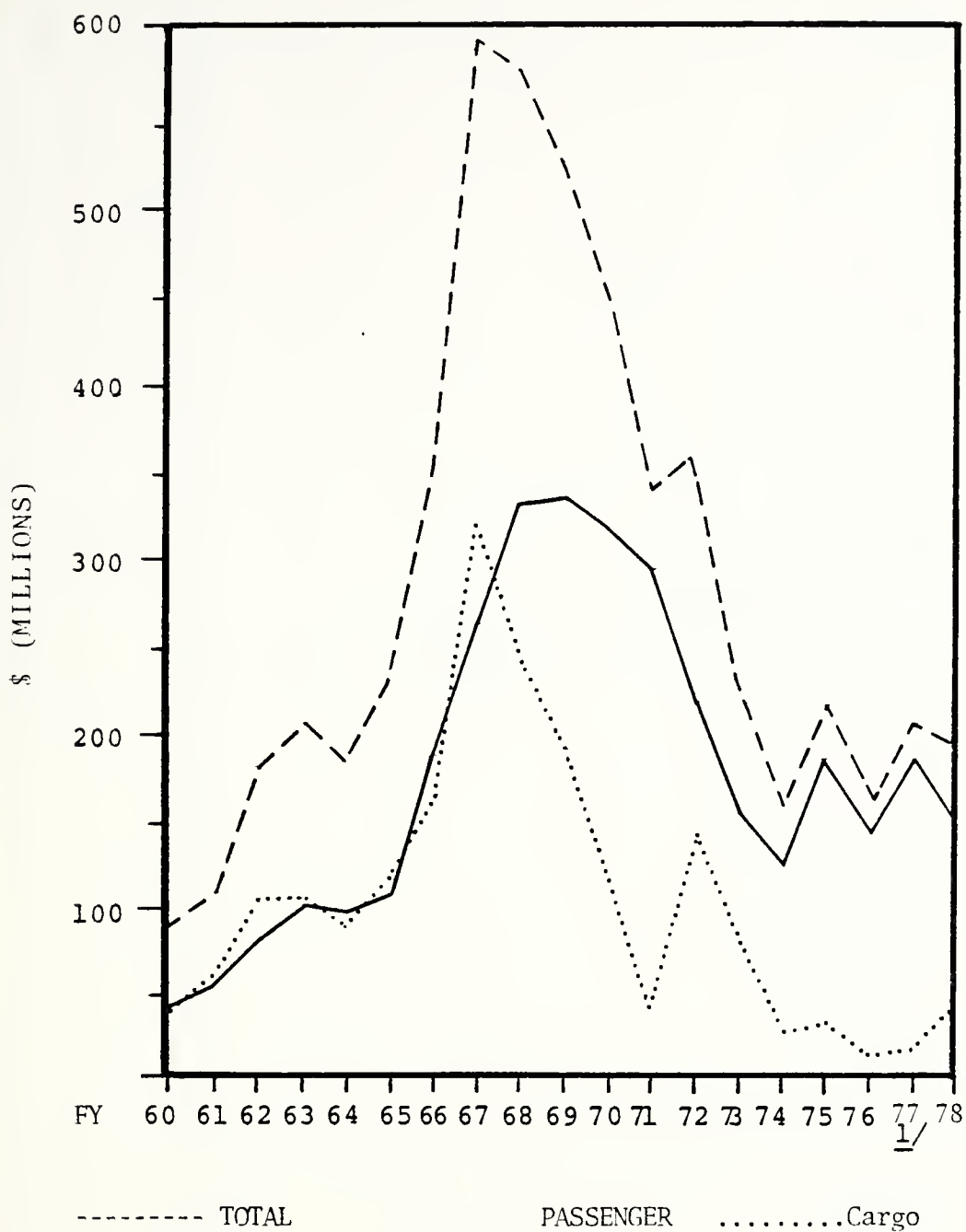


Figure 2. MAC International Civil Airlift Procurement
FY 1960 - FY 1976

Sources: The Decline of Supplemental Air Carriers in the United States [17:980]
Headquarters, Military Airlift Command [9]

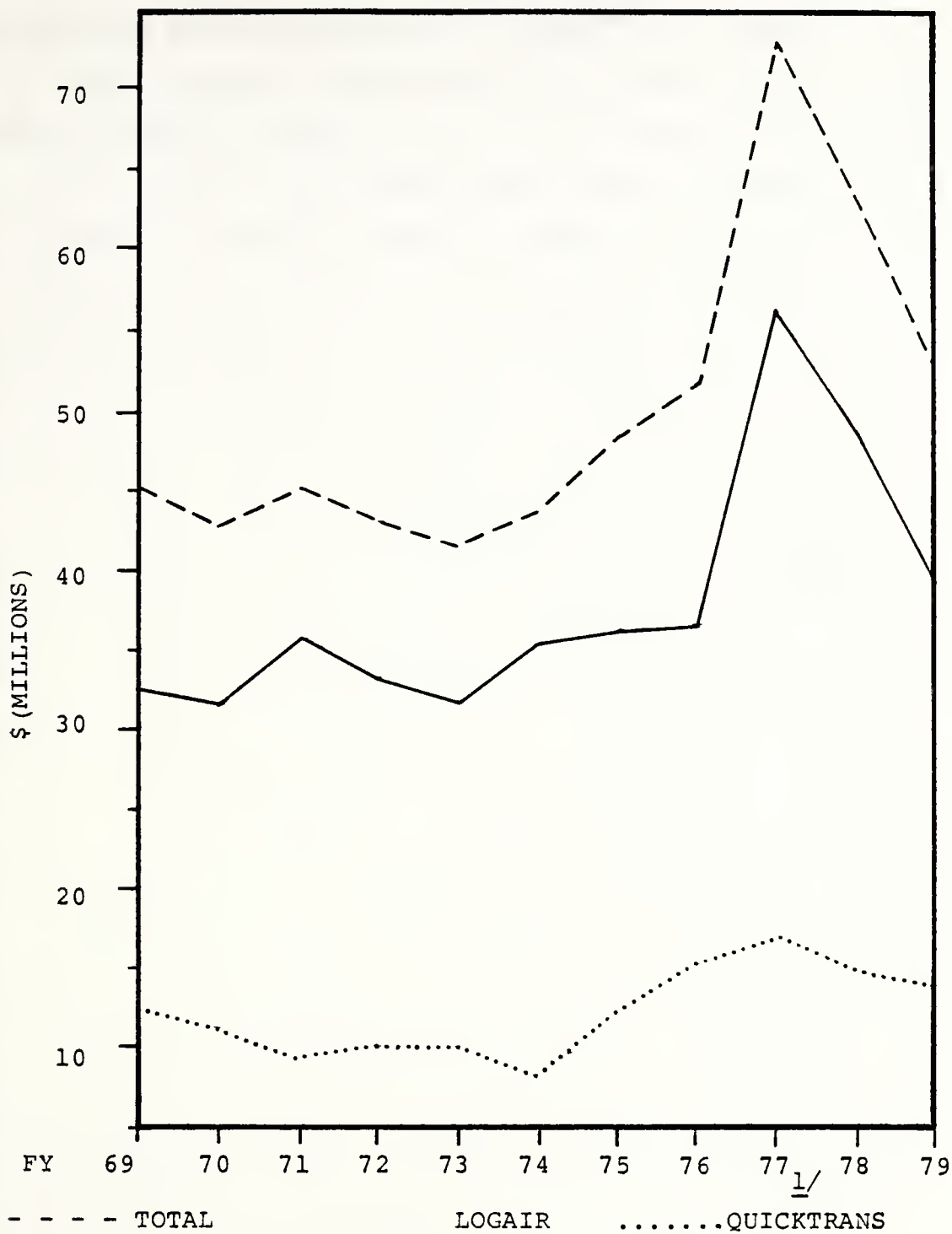


Figure 3. MAC Domestic Civil Airlift Procurement
FY 1969 - FY 1979

SOURCE: Headquarters, Military Airlift Command [9]

is required to produce the necessary capability. Moreover, the airlines have also claimed that MAC is operating an airline in direct competition with the civil air carriers and in doing so, MAC is violating the policies established and supported by the President and Congress ever since the early Sixties. Finally, the industry maintains that the shortfall in cargo airlift capability which exists is the result of DoD's failure to make use of the incentives made available by the Congressionally-mandated commercial airlift program.

In the past, legislation has been proposed to resolve this dilemma. Senate Bill 1821, introduced in 1971, would have required the Department of Defense to contract for at least 40 percent of its international cargo airlift with commercial air carriers. Eventually defeated in 1972, it was followed by Senate Bill 1350 and House Bill 5085 in 1973 which contained similar provisions. These attempts at legislating a fixed percentage of DoD cargo business for the commercial carriers also failed.

As commercial air carriers cannot obtain sufficient cargo business from either civilian or DoD sources to enable them to build and maintain in peacetime a reserve air fleet capable of meeting presently established wartime needs, it appears that the CRAF modification program, mentioned earlier, holds the most promise for resolving the dilemma. It will permit MAC to maintain essential military readiness while contemporaneously assuring the nation of an adequate civilian airlift augmentation capability.

C. THE COMMERCIAL AIRLIFT ACQUISITION PROCESS

The present system of Department of Defense negotiated airlift services acquisition, including both domestic and international air transportation (long- and short-range), is accomplished under the mobilization base authority of the Armed Services Procurement Act--10 USC 2304 (a) (16). On the basis of a Secretarial Determination and Finding, annual airlift service needs and airlift mobilization base requirements for national defense are met by a single contract.

As the single manager operating agency for airlift service in support of DoD requirements, one of MAC's responsibilities with respect to the CRAF program is the preparation, negotiation, and administration of airlift contracts. The Commander-in-Chief, Military Airlift Command, as the DoD executive agent for airlift, annually negotiates one of two kinds of contracts with air carriers in the CRAF program--fixed-buy or expansion.

The fixed-buy contract covers DoD's regular purchase of peacetime airlift services. This represents a firm or guaranteed airlift purchase for requirements anticipated in advance. Annually, each of the Service components prepares an airlift requirements forecast which serves as the basis for the amount of fixed-buy airlift contracts. Furthermore, the provisions of the fixed-buy contracts provide for the purchase of additional airlift to satisfy short-notice requirements as they arise. Under the provisions of airlift contracts, DoD has the right to order this expansion service; contractors, however, are not

bound to offer the service. Figure 4 compares the volume of international airlift which is fixed-buy and expansion. Finally, fixed-buy contracts bind air carriers to provide specific aircraft to each of the three stages of CRAF activation.

The second contract type--the call contract--is negotiated with carriers which elect not to receive normal peacetime DoD business. However, under contractual agreement, these carriers obligate themselves to make available to DoD aircraft for Stage III CRAF activation. In fiscal year 1979, seven contractors entered into call contracts.

Eligibility to provide contract airlift service to DoD is predicated on a carrier's holding a Certificate of Convenience and Necessity issued by the CAB under section 401 of the Federal Aviation Act of 1958. In addition, prospective contractors must possess aircraft which are of U.S. registry and suitable for CRAF allocation. Moreover, the aircraft offered by a contractor must be subject to its control as of the date of its offer and for the full term of the contract.

Yearly, MAC issues Requests for Proposals (RFP) to eligible carriers to solicit the required cargo and passenger airlift services. Separate solicitations are made for each of the required services--long-range international, domestic (QUICKTRANS and LOGAIR independently), short-range international, and Alaskan. These solicitations lead to the award of definite-quantity-fixed-unit-price type contracts.

The international RFP schedule itemizes the required airlift services by route and the number of flights required over that

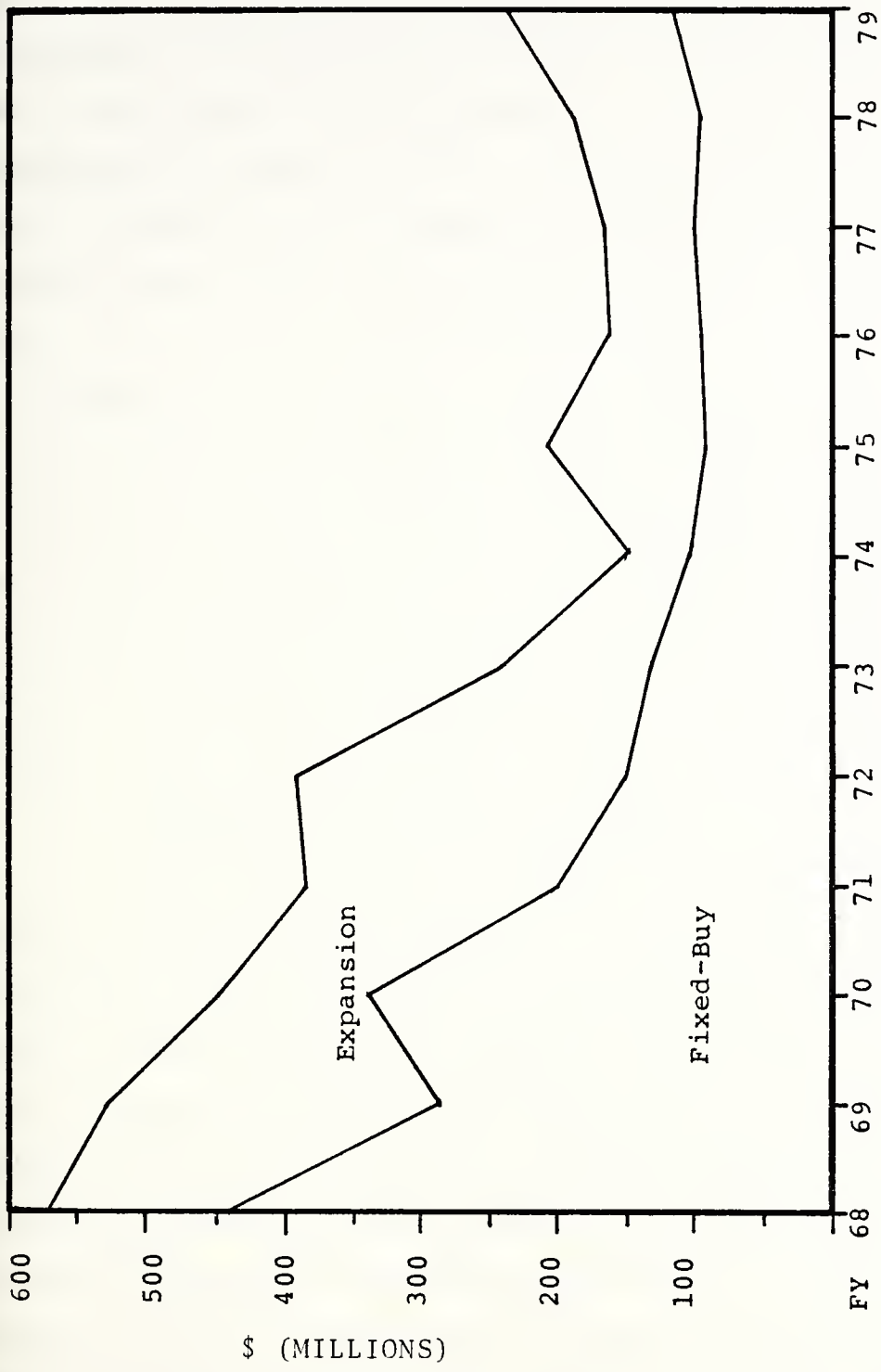


Figure 4. International Airlift Dollar Volume--Fixed-Buy and Expansion Airlift Services
Source: Headquarters, Military Airlift Command [5]

route in each month. Carriers can submit offers on as many items, either in total or part, as they choose. This gives carriers the opportunity to select those routes which closely approximate the routes they already fly. When making awards, MAC takes a carrier's route desires into consideration. The domestic RFP schedule differs in that it itemizes the routes, and the regular days and times at which service must be provided. Additionally, carriers must offer on the total quantity of an item.

Under the CRAF program, the participants are contractually committed to provide specific aircraft to each of the stages of CRAF activation. In return, MAC allocates military cargo and passenger business according to a complex formula which basically relates the amount of traffic awarded to an individual carrier to that carrier's contribution to CRAF in terms of number, types, and performance characteristics of aircraft.

1. Airlift Service Award Evaluation

The initial amount of business offered to each contractor for long-range international service is based on the number of aircraft that the carrier is making available for acceptance by DoD to meet contractual commitments for airlift services that may occur at mobilization base levels I through III. In computing the initial amount of business given to each carrier, credit is given for aircraft assigned to Stage III only if those aircraft have also been offered by the contractor for Stages I and II. The amount of business offered initially to each contractor for (1) short-range international, and (2)

domestic service is computed separately on the basis of the number of aircraft offered and accepted for mobilization base II. Alaskan requirements are negotiated separately with the view of obtaining the commitment of aircraft to Stages II and III of CRAF.

Several other factors are also taken into consideration when determining award amounts. These include: (1) a carrier's agreement to utilize MAC uniform negotiated rates, (2) the extent to which a carrier has been successful in arranging for "no work stoppage" agreements with its employees to minimize disruption of DoD airlift services during labor disputes, and (3) a carrier's realization of at least 60 percent of its total air transportation revenues from commercial, non-defense sources.

Finally, with respect to award evaluation, bonus credits are given to carriers who have placed firm orders for wide-bodied convertible or freighter aircraft, either new or modified from an existing passenger-only configured aircraft. The bonus credit is equal to 100 percent of the normal mobilization value for the first year after delivery. In addition, carriers acquiring convertible aircraft receive a 50 percent bonus credit for a period of four years after the first year.

2. The Mobilization Base Index

Contracts for airlift are awarded on the basis of Mobilization Base Index (MBI) points. This index provides award differentials for the various types of aircraft and the differing versions (passenger, convertible, or cargo) for each type.

For the purpose of awarding long-range international airlift contracts, each type of aircraft is assigned a mobilization value which reflects the relative value DoD places on its capacity. Capacity is measured in terms of (1) the carrying capacity or payload of an aircraft at 3500 NM, taking into account both the aircraft cabin load (ACL) at that range and the practicable usable cube, (2) block speed (the average of cruising speed and the lower take-off and landing approach speeds) of each aircraft at 3500 NM, and (3) configuration and convertibility of each aircraft offered.

The mobilization value for convertible and cargo aircraft is determined by a calculation. Using the B-707 as the base aircraft, the above characteristics are first converted to weighted values--mobilization value (MV) factors for weight, cube, and speed--which reflect the relative capacities of each aircraft type. For example, the B-747-200C is assigned a cube factor of 4.71 since its cubic capacity is 4.71 times that of a B-707. The weight and cube factors are then combined into an overall payload factor for each aircraft type. In recognition of configuration, incentive factors of 100 percent for convertible aircraft and 80 percent for cargo-only aircraft are assigned. The MV is then computed using the following formula:

$$\text{Payload Factor} \times \text{Speed Factor} \times \text{Incentive Factor} = \text{MV}$$

The mobilization value for passenger aircraft is computed in the same manner. In this instance, however, the aircraft characteristics given MV factors include passenger

payload, lower lobe cargo capacity, and aircraft block speed. The aircraft MV is calculated using the following formula which includes the configuration incentive factor of 40 percent for passengers and 80 percent for cargo.

$$\begin{array}{l} \text{Passenger} \\ \text{Factor} \end{array} \quad \times \quad \text{Speed Factor} \quad \times \quad \text{Incentive Factor} \quad \times \quad 10 = \text{PAX MV}$$
$$\begin{array}{l} \text{Lower Lobe} \\ \text{Cargo Factor} \end{array} \quad \times \quad \text{Speed Factor} \quad \times \quad \text{Incentive Factor} \quad \times \quad 10 = \underline{\text{Cargo MV}}$$

Aircraft MV

Table V lists the mobilization values for each aircraft type in the CRAF program.

A carrier's total award index is computed by summing its Stages I, II, and III mobilization points. The percentage this equals of the total award indices for all carriers in the amount of the total long-range international requirement which is awarded in terms of dollars, both as fixed-buy and expansion. In computing the final award amounts, however, no more than 10 percent of the award points are assigned to accepted passenger aircraft.

The total dollar amounts awarded to carriers for domestic contracts is determined separately using a similar procedure.

D. AN ASSESSMENT OF THE CURRENT AIRLIFT ACQUISITION PROGRAM

To briefly recapitulate: the purpose of the current airlift acquisition program is to (1) encourage U.S. air carriers to procure the types of up-to-date convertible and cargo aircraft best suited for strategic airlift purposes thereby strengthening

TABLE V
Aircraft Mobilization Values

Type of Aircraft	Convertible	Configuration Cargo	Passenger
B747-200F Cargo	-	29.425-31.985	-
B747-200C Conv	35.842	-	-
B747-100F Cargo	-	26.760-29.058	-
B747 PAX	-	3.867	9.292
DC-10-40C Conv	23.496	18.797	-
DC-10-40 PAX	-	2.232	6.984
DC-10-30CF Conv	24.173-24.577	19.338-19.662	-
DC-8-63	12.060	9.648	5.308
DC-8-50	9.200	7.360	-
B707	10.000	8.000	4.000
B727C/QC	6.174	-	-
DC-9-30C	5.665	-	-
L-100-30	-	5.330	-
L-100-20	-	4.656	-
L-100-10/L382	-	3.900	-
L-188C	-	4.154	-

Sources: International Air Transportation Services (long-range) [7:D9,D10]
Domestic Air Transportation Services (QUICKTRANS)
[6:D4]

the civilian airlift mobilization base, (2) assure that the prices DoD pays for airlift services during both peacetime and contingency periods are fair and reasonable, and (3) provide for an orderly, incremental civilian airlift augmentation, in stages up to and including full wartime mobilization. At this time, it is appropriate to ask if the existing program in fact supports these goals.

First, it is apparent that the existing acquisition program no longer serves to encourage air carriers to purchase convertible or cargo aircraft. In the past, when the total dollar amount of MAC awarded airlift contracts was significantly higher and the purchase price of new aircraft was appreciably lower, the acquisition program offered a much greater incentive for air carriers to procure CRAF suitable aircraft. Today, however, with the purchase price of a convertible B-747 exceeding \$70 million, it is evident that the current acquisition levels--about \$200 million annually for long-range airlift services--will not motivate air carriers in CRAF to procure convertible or cargo aircraft.

Furthermore, the evidence suggests that the bonus credits given carriers as a reward for the purchase of new aircraft has not influenced the procurement practices of the air carriers. The long-lead times associated with the purchase of new aircraft today--in some instances a total of five years from date of order until delivery--renders the bonus credits ineffective as incentives because they only enter into the award determination beginning in the year the aircraft is delivered. Additionally,

the high investment per dollar of MAC peacetime business has relegated this incentive to an insignificant factor in an air carrier's decision to purchase a wide-bodied, cargo-capable aircraft.

Similarly, the airlift acquisition program has not been effective in broadening the mobilization base of the domestic component of CRAF. The number of carriers eligible to participate in domestic contracts is limited by aircraft requirements, and the contract award structure and rules. As a result, only four carriers are currently engaged in domestic airlift service for DoD. Because of the small number of air carriers offering DoD domestic airlift service, the award of contracts on the basis of the Mobilization Base Index leads to the allocation of most of the business to a single large contractor. The Military Airlift Command has recognized the problem inherent in relying strictly on the MBI for award distribution, that is, the vulnerability of service disruption when only one carrier is providing most of the airlift service. Accordingly, in determining tentative dollar awards, MAC considers first the broadening of the mobilization base and second the effectiveness of route operations. To the extent necessary, these considerations take precedence over the MBI.

Second, the minimum rates applicable to DoD airlift contracts are based on the actual costs incurred by the air carriers performing services for the Government plus a reasonable rate of return on the carrier's investment in equipment used to serve DoD. As the rates are computed on the basis of average

costs of all CRAF participants, use of the rates to price contracts neglects both the circumstances of individual carriers and the market environment in which they operate. Consequently, the present award structure neither rewards nor provides an incentive for efficient carrier operations. Moreover, it does not encourage DoD to utilize the more efficient air carriers. It may be argued that the costs incurred for airlift services may have been higher than if compensatory rates were paid to efficient carriers.

Third, the present acquisition program does provide an effective system for an orderly commercial augmentation of DoD. It should be noted, however, that in the 16 years since the adoption of the incremental mobilization system, activation of CRAF has not occurred. Commercial air carriers have voluntarily increased service levels to the extent necessary to satisfy DoD requirements. During the height of the Vietnam War, air carriers provided DoD with airlift services at a level not too far below that which would have been provided with activation of Stage I of CRAF. The stimulus for airlines to respond voluntarily to DoD's needs stems from the fact that when CRAF is activated, operational control of aircraft committed to a particular stage activated reverts to MAC. Thus, air carriers can avoid the loss of operational control of their aircraft by voluntarily providing DoD with increased airlift service levels.

V. A PROPOSAL TO INTRODUCE PRICE COMPETITION
INTO THE ACQUISITION OF COMMERCIAL AIRLIFT

As discussed in the preceding chapter, it has been the policy of the Department of Defense for the past 18 years to award airlift contracts on the basis of non-competitive negotiation. Until recently, the Civil Aeronautics Board set the rates used to price DoD airlift service contracts. This precluded price competition from being used to determine the distribution of airlift service awards among eligible carriers. Instead, an air carrier's willingness to contribute to CRAF determines the dollar amount of its award.

In the absence of CAB established rates, the Military Airlift Command has developed its own uniform negotiated rates, the equivalent of Part 288 rates, with which to price DoD airlift service contracts. The Military Airlift Command chose to adopt this method of pricing airlift contracts because of its concern over the possible effects that the use of price competition might have on the CRAF participant's willingness to commit aircraft to the mobilization base. Provided certain criteria are met, the existing acquisition program guarantees some airlift business to all eligible carriers submitting offers.

The objective of this section is to develop and evaluate a revised contract award structure which not only introduces price competition into the award process but also continues to provide an incentive for air carriers to commit aircraft to the

mobilization base. The award structure described below is envisioned as a means of achieving the aforementioned objectives.

A. ASSUMPTIONS

To permit development of a revised award structure, certain assumptions were made. The assumptions listed below are central to the discussion which follows.

1. The CRAF modification program as described in Chapter III will receive Congressional approval. Additionally, in its final form, the program will require participating carriers to commit modified aircraft to Stage III.

2. The quantity of commercial airlift service for which MAC contracts annually will remain at current levels.

3. The airlift requirements to be satisfied by the civilian airlift mobilization base are not expected to change appreciably.

4. The CRAF air carriers comprising the market actively want DoD airlift contracts and are therefore willing to price competitively to get them. Presently, one-third of the CRAF carriers do not participate in MAC's peacetime airlift business.

B. THE REVISED AWARD STRUCTURE

The maintenance of a broad civilian airlift mobilization base, responsive to DoD's requirements, dictates that the acquisition of commercial airlift by negotiation be continued. However, the negotiation could be made competitive by means of a revised award structure which uses the price of the services offered instead of the Mobilization Base Index as the primary factor determining the dollar amounts of awards carriers receive.

To ensure the availability of this mobilization base to DoD, air carriers would be required to commit a certain percentage of their cargo and passenger aircraft fleets to Stages II and III in order to establish an eligibility to submit offers to DoD for peacetime airlift business. So that the broadest possible mobilization base is achieved, aircraft already committed to Stage III by the CRAF modification program could not be used to satisfy this requirement. Air carriers would agree to make designated aircraft available for service within 24 and 48 hours, respectively, of the activation of Stage II or III. Additionally, carriers would be required to establish their ability to provide these aircraft either by ownership, or through lease or subcontract arrangements.

Each of the required services--Long-range International, Short-range International, Domestic, and Alaskan--would continue to be contracted for separately. So as to distribute business among the maximum number of air carriers, however, Long-range International cargo and passenger requirements would become the object of separate solicitations.

The definite quantity contracts that MAC presently employs would be replaced by indefinite quantity contracts. As MAC knows neither the exact time nor the exact quantity of airlift it might require during the course of a year, the indefinite quantity contract is well suited for the acquisition of this service.

Under an indefinite quantity contract, MAC would guarantee each carrier receiving an award that it would order a minimum

amount of airlift service, which might include no service, during the contract period. The total of the minimum airlift service quantities would be sufficient to satisfy DoD's anticipated requirements--equivalent to the current fixed-buy quantity. In addition, each contract would specify the maximum quantity of airlift service that each carrier might be called upon to provide. The maximum airlift service quantities when summed would equal the total airlift capability presently available to DoD by activation of Stage I. Air carriers would provide service over the minimum specified in their contracts pursuant to an order placed by MAC.

In its annual Request for Proposal, MAC would indicate anticipated passenger- and ton-mile requirements. The solicitation would require air carriers to submit offers on a step-wise basis and to specify a pricing structure for intermediate levels. Thus, air carrier's offers would respond with a price for each step, i.e. quantity of passenger- or ton-miles, as applicable, specified in the RFP. Air carriers would also indicate how they propose to establish a price if they are offered a quantity of airlift service that does not correspond to a step. In the event that a carrier does not desire to participate in DoD's peacetime business, MAC would give it the option of entering into a call contract under which the carrier would be obligated to provide aircraft to DoD service should Stage III activation occur.

After prospective contractors have submitted offers stating the number of passenger- and ton-miles, as applicable, that they

are bidding on and their price offer for each category, negotiations would be conducted with carriers who fall within a competitive range established by MAC. If analysis of the offers indicates that the prices are reasonable in comparison with current or recent prices for the same services procured in the same quantities under competitive conditions, individual offers would then be assessed by price analysis techniques. However, if this is not the case, MAC would perform a detailed review and analysis of all cost data submitted by offerors in support of their price quotations.

The lowest responsible and responsive offeror(s) would receive award(s) specifying the largest minimum and maximum airlift service quantities. As is presently the case, the total dollar amount of an award would be restricted so that an air carrier received no more than 40 percent of its total revenues from the Government. This reflects the requirement that air carriers be capable of providing greatly expanded contingency services. The contract awards would be firm-fixed price with escalation to permit adjustments for increases in fuel prices.

After MAC has provided the carriers with their guaranteed share of the airlift business, it would then place orders for additional airlift services with the contractor who offered the lowest price. When the maximum quantity specified in the contract is reached, MAC would then begin placing orders for additional service with the next lowest offeror. This process would be repeated as often as necessary to satisfy airlift requirements. If a carrier is unable to provide the requested service, it would be required to arrange for substitute service.

In the event of activation of Stage II and III, carriers would provide service to DoD at uniform rates established by MAC. These rates would be based on average costs for all CRAF carriers.

C. DISCUSSION

The contract award structure described in the preceding section does incorporate price competition into the acquisition process while also ensuring the availability of a responsive civilian airlift mobilization base to DoD. The ensuing discussion evaluates the introduction of price competition into the award process.

One of the significant advantages in the competitive approach is that it provides an incentive for all participating carriers to submit lower offers which, from DoD's standpoint, will favorably affect the total cost of commercial airlift. Additionally, carriers with more efficient operations would benefit because they would be able to secure a larger percentage of DoD's cargo and passenger traffic. However, the revised award structure prevents a carrier from becoming too dependent on DoD airlift contracts by restricting the total dollar amount of business the carrier can receive to a percentage of its total revenues.

Conversely, no real competition for DoD contracts may currently occur because the air carriers are unable to submit offers. The recent surge in traffic experience by the airline industry has taxed some carriers to the point where they have no idle capacity. Under such circumstances, a carrier would be reluctant

to make a commitment to provide airlift service to DoD on an indefinite quantity contract basis. In order to give it the flexibility to respond to DoD's requirements, a carrier might have to lease additional aircraft or hire additional air crews. Consequently, if offers are made at all, they will be at prices that include all manner of contingencies. As a result, DoD could expect to pay more for required airlift services.

Another advantage is that the proposed award structure also ensures the availability of peacetime expansion airlift to DoD. Under indefinite delivery contracts, contractors would be required to provide service up to a contractually specified maximum quantity whereas presently they can decline to provide DoD with expansion service. Thus, the recently experienced difficulties in obtaining expansion service could be averted. Additionally, indefinite delivery contracts would obviate the need for Stage I because airlift service at that level already would be specified in the contracts.

Further, the proposed award structure would also assure DoD the availability of a responsive civilian mobilization base. This stems from the requirement that carriers commit a certain percentage of their fleets to the mobilization base in order to establish eligibility to submit offers for DoD airlift business. Additionally, an orderly augmentation process up to and including full mobilization is retained.

Finally, an oft repeated argument against the introduction of price competition in the airlift acquisition process is that in the past it produced dismal results. It lead to destructive

bidding among some carriers seeking DoD airlift business and in the final analysis it had an adverse effect on the civilian airlift mobilization base. However, since the late 1950's the airline industry has undergone a significant change in its nature and composition. Deregulation of the airline industry has brought further change. The price competition that deregulation has fostered in the commercial marketplace has not lead to destructive bidding practices by the air carriers. This suggests that air carriers will not resort to destructive bidding to obtain DoD airlift business.

VI. CONCLUSIONS

The goal of this thesis was to develop a revised contract award structure which would introduce price competition into the Military Airlift Command's commercial airlift acquisition program and simultaneously preserve U.S. air carrier support of the CRAF program. While the product of this study is a proposal for a revised airlift contract award structure, the reader is reminded that the study effort was constrained by the limited time available to perform research and the unavailability of some research materials. Nonetheless, based on the available information, it appears the revised contract award structure presented in this thesis is a viable alternative.

Because of the importance of the philosophy underlying the acquisition of commercial airlift by DoD, several perspectives of the CRAF program and the attendant airlift acquisition policy were synthesized in considerable detail in Chapters II, III, and IV. In these chapters, the study overviewed the requirement for a civilian airlift mobilization base to augment DoD organic airlift capability, examined the composition and capabilities of CRAF, and described the acquisition program and its award structure, i.e., the mobilization base index.

It was pointed out that since the early 1960's, the United States' defense policy has dictated the need for a formidable strategic airlift capability. A history of successive crises had underscored the importance of long-range airlift capability to support both U.S. forces overseas and those of our allies.

The development of the Civil Reserve Air Fleet Program in 1952 stemmed from an appreciation by the President, Congress, and the Defense Department that a civilian-military partnership was necessary to assure that adequate strategic airlift capability existed to meet national emergencies. Due to a number of shortcomings in the program as originally formulated, it was modified by a presidentially-approved directive issued by the Secretary of Defense in 1960. Among the recommended policy changes, which altered the then existing procurement policies and practices, were the elimination of competitive bidding procedures, the use of Civil Aeronautics Board established rates to price military airlift contracts, and the introduction of a contract award structure which related the amount of DoD airlift business a carrier receives annually to that carrier's contribution to CRAF. Today, the commercial airlift acquisition program continues as revised in 1960.

While the policies and procedures instituted in the early 1960's have been credited to some extent with the modernization of the reserve air fleet, it is evident that changing CRAF requirements and the changing complexion of the airline industry dictate the need for DoD to revise current airlift acquisition policies and procedures. The recent deregulation of the airline industry, furthermore, with its emphasis on competition to determine the quality, variety, and price of services, together with the CAB's decision to discontinue setting rates applicable to military airlift are other factors dictating a need for change. Additionally, the Government has recently

reaffirmed the principle of competition as a matter of acquisition policy. Thus, it appears appropriate at this time to consider the introduction of some form of price competition into MAC's commercial airlift acquisition program.

The contract award structure developed in Chapter V is designed not only to introduce price competition into the airlift acquisition process but also satisfy MAC's acquisition objectives which are to obtain airlift services at fair and reasonable prices, meet current peacetime airlift requirements, and maintain an airlift mobilization base responsive to any level of emergency. It relies on a competitive negotiated process to award indefinite quantity contracts to multiple contractors. Based on information available to the author at the time this thesis was being written, it appears that the proposed method of awarding contracts is a feasible alternative.

The present airlift acquisition policies and procedures have formed the basis of the CRAF program for close to 20 years. The successful implementation of revision to the current airlift acquisition program will require considerable coordination between DoD, MAC, and the air carriers.

Finally, the reader should note that the information presented in this thesis regarding MAC's recent alterations to its acquisition policies and procedures may be dated. Due to time restrictions, research had to be terminated before MAC had finalized its fiscal year 1980 acquisition program. The situation with regard to airlift acquisition policies and procedures during the research period can best be described as fluid. Thus,

as new information becomes available, some of the conclusions and recommendations in this thesis may be invalidated.

APPENDIX A

SCHEDULE OF UNIFORM RATES AND RULES FOR FY 80 COMMERCIAL AUGMENTATION



EFFECTIVE 1 OCTOBER 1979

Appendix A

Military Airlift Command (MAC) Schedule of Negotiated Uniform Rates and Rules

In accordance with a Memorandum of Understanding between MAC and carriers willing to participate in the Civil Reserve Air Fleet (CRAF) program, following are the rates and rules that apply to air transportation services performed for MAC.

A - Definitions. (1) "Category A transportation" means the transportation in scheduled service of individually ticketed passengers or individually waybilled cargo pursuant to contracts with MAC.

(2) "Category B transportation" means air transportation in planeload lots of passengers and/or cargo pursuant to contracts with MAC.

(3) "Category Y transportation" means the round trip movement of passengers in scheduled service in blocks of 20 or more pax per flight at the rate established for round trip Category B service pursuant to contracts with MAC.

(4) "Category Z transportation" means the transportation in scheduled service of individually GTR ticketed passengers pursuant to filed tariffs.

(5) "Logair" means all-cargo charter service over interstate routes principally between Air Force installations pursuant to contracts with MAC.

(6) "Quicktrans" means all-cargo charter service over interstate routes principally between Navy installations pursuant to contracts with MAC.

(7) "Substitute services" means the performance by an air carrier of air transportation in planeload lots for another air carrier to fulfill such other air carrier's contractual obligation to MAC.

(8) "Suspension charge" means the amount to be paid by MAC to an air carrier, pursuant to terms and conditions of the contract between the carrier and MAC when a contract charter flight (other than a Logair or Quicktrans flight) is suspended by MAC.

B - Rates. The rates for air transportation services shall not be less than the following:

(1) For Category B charter services the following rates apply for all long range aircraft types:

<u>Passenger Rates, Cents Per Passenger Mile</u>		<u>Cargo Rates, Cents Per Ton Mile</u>	
<u>Round Trip</u>	<u>One Way</u>	<u>Round Trip</u>	<u>One Way</u>
3.3075	5.2683	13.8125	22.1293

Provided, that subject to the provisions of paragraph C the rates set forth above shall not be applicable to passengers or cargo carried on a particular trip in excess of the amount that the contract calls for MAC to supply and the carrier to provide space: and provided further, that if a carrier performs a one-way charter flight carrying nonmilitary traffic for a nonmilitary user, the carrier may charter the return flight of that aircraft to MAC at a published one-way charter traffic rate that is in fact available to the general public for equivalent services: And, provided further, that payment of the following charges shall be made in addition to the above rate for all operations to/from the following stations:

	<u>Narrow Body Aircraft</u>	<u>Wide Body Aircraft</u>
Los Angeles Intl Airport -		
Hanover, Germany -		

And, provided further, that individual carrier payment adjustment factors will be applied each month to the basic rate to compensate for variances in fuel prices incurred at all required commercial stations transitted on MAC contract flights and Rhein Main AB, GE. Each carrier's adjustment will be developed by computing the percent variance in the average monthly fuel price in MAC Category B long range operation versus the Defense Fuel Supply Center standard price of JP-4 fuel and applying this variance to the weighted average percent that fuel is to the basic rate. Each month's adjustment factors will be based on the latest available carrier fuel data (i.e. August 1979 fuel data used to compute October 1979 payment adjustment factors). A single weighted average fuel surcharge will be developed for Categories A, Y & Z service, using the weighted average fuel costs incurred in the MAC Category B long range operation for the most current month in which data is available and applied to the basic rate, provided this average increase is equal to or greater than one cent per gallon. Fuel reports will be submitted monthly (by the 20th of the following month) by all carriers performing Category B services. This report will be submitted in the format shown in Appendix A. This data will be subject to audit verification by DCAA.

(2) For Logair and Quicktrans services. (RESERVED)

(3) The compensation for substitute service shall not be less than that which the prime contractor would have received under his contract with MAC.

(4) For Category A/Z transportation services:

(a) Category A/Z Passengers - One-way Category B passenger mile rate plus applicable fuel surcharge; provided that, if a carrier has on file a tariff rate available to the general public for equivalent unrestricted service which is less than the above rate, then the tariff rate shall apply.

(b) Category A Cargo - One-way Category B ton mile rate plus applicable fuel surcharge; provided that, if a carrier has on file a tariff available to the general public for equivalent unrestricted service which is less than the above rate, then the tariff rate shall apply.

(c) The foregoing rates per passenger mile and per ton mile shall be applied to the shortest mileage between the commercial air carrier points as set forth in the latest IATA Mileage Manual used to compute point-to-point passenger rates and cargo rates per pound.

(d) For cargo services to/from military bases outside the United States, the rates per pound shall not be less than the rates to/from the nearest commercial point, computed in accordance with subparagraphs (b) and (c) of this paragraph.

(e) The cargo rates determined in accordance with subparagraphs (b) through (d) of this paragraph shall be applied on the basis of a standard weight per pallet of 4,980 pounds for wide-body aircraft and 3,750 pounds for narrow-body aircraft.

(5) For Category Y passenger transportation services - Round Trip Category B passenger mile rate plus applicable fuel surcharge.

(6) For suspension charges, 36 percent of the rate based on the passenger charter rate and 38 percent of the rate based on the cargo charter rate otherwise applicable to the suspended flight.

C - Aircraft loads. The rates set forth in Para B(1) shall be applied to the following aircraft loads:

<u>Aircraft Types</u>	<u>Number of passengers, All-passenger flights</u>	<u>Number of tons, All-cargo flights</u>
B-747	402 (9 abreast seating)	90
B-747	461 (10 abreast seating)	90

DC-10-30	354	75
L-1011	272	--
B-707-320B/C	180	36.5
DC-8F-61,63	235	45
DC-8-62	180	39.2
DC-8 (50 Series)	180	36.5

Provided that, if a carrier is prevented from accommodating a load equal to that specified above for reasons other than adverse weather, off-loading by MAC or bulk of the cargo supplied by MAC, payment will be based on the actual load, but in no event less than 90 percent of above loads except for pax aircraft which are configured for a lesser number of seats in which case payment will be based on actual number of seats in the aircraft.

D - Round trip services. Round-trip services means charter service other than Logair and Quicktrans services where: (1) Passengers and/or cargo are transported on two or more successive revenue flights and the last revenue flight terminates within 250 statute miles of the point of origin of the first revenue flight or, at a point within 250 statute miles of the carrier's operating base; (2) the air carrier operates a follow-on flight from the terminating station of a previous flight within 72 hours after arrival; (3) the air carrier operates en route not more than one ferry flight not exceeding 50 statute miles without compensation; and (4) the air carrier operates en route ferry flights in excess of 50 statute miles for compensation equal to not less than 75% of the round-trip cargo rate for all ferry miles operated, regardless of whether the live flight is a passenger or cargo flight. In the event the air carrier operates a flight where the distance between the originating and terminating points exceeds 250 statute miles and the terminating station is not within 250 statute miles of the carrier's operating base or the carrier does not operate a follow-on flight from the terminating station within 72 hours, the compensation shall be 75% of the round-trip cargo rate for the distance between the originating and terminating points.

E - On-loading and off-loading of traffic. MAC will be permitted to on-load and/or off-load traffic (passenger or cargo) at any operational stops enroute made for the carrier's convenience, to the extent that it does not interfere with the carrier's scheduled ground operation.

F - Computation of passenger-miles and cargo ton-miles for pay purposes.

(1) General Rule. The computation of passenger-miles and cargo ton-miles for charter service shall be based on no lesser mileage than the nonstop great-circle airport-to-airport distance, in terms of statute miles from the point of origin of the revenue flight to the point of destination of such flight, via such

intermediate points as are required to be served by the terms of the MAC contract. If the direct nonstop airport-to-airport distance from the point of origin of the revenue flight to the point of destination of such flight, or between any pair of points comprising a route segment required to be served by the terms of the MAC contract, is 4,000 miles or more and no intermediate points are required to be served by the terms of the contract or are specified in paragraph (2) of this section, the mileage shall be computed via the routings which yield the shortest mileage.

(2) Pacific Services. In the case of Pacific services, the mileage shall be computed via the routings indicated in Appendix B.

FUEL PURCHASED AT MILITARY BASES

FUEL PURCHASED AT COMMERCIAL STATIONS & RHEIN MAIN[illegible]

Prices for Contract Fuel purchases at each commercial station and Rhein Mail must be supported by invoice or wire notice from supplier. Spot fuel prices must be supported in same manner or by message from crew member noting number of gallons purchased and price paid.

11/ Amounts must tie in to those shown for MAC operations on Form 41 Schedule P-12(a).

PACIFIC ROUTINGS

BETWEEN	THAILAND	SOUTH VIETNAM	PHILIPPINE ISLANDS	GUAM	KOREA	HAWAII	FORMOSA	OKINAWA	JAPAN	ALASKA
CONUS A/	4 or 6	4 or 6	4 or 6	5	4 or 8 B/	1	4 or 8 B/	4 or 8 B/	2 or 5 B/	1
ALASKA	3	3	3	--	3	--	3	3	1	
JAPAN	1	1	1	1	1	1 B/	1	1		
OKINAWA	1	1	1	1	1	3 B/	1			
FORMOSA	1	1	1	1	1	3 B/				
HAWAII	7	7	7	1	3 B/					
KOREA	9	9	1	1						
GUAM	1	1	1							
PHILLIPINE ISLANDS	1	1								
SOUTH VIETNAM	1									

ROUTINGS

- 1. Direct
- 2. Via Anchorage
- 3. Via Yokota AB, Japan
- 4. Via Anchorage - Yokota AB, Japan
- 5. Via Honolulu
- 6. Via Honolulu - Guam
- 7. Via Guam
- 8. Via Honolulu - Yokota AB, Japan
- 9. Via Taipei

A/ If the nonstop mileage between the station in the CONUS and Honolulu or Anchorage exceeds 4,000 miles, the General Rule applies.

B/ Honolulu-Yokota AB, Japan either direct or via Guam as specified in the MAC contract.

APPENDIX B

MEMORANDUM OF UNDERSTANDING

BETWEEN

(CARRIER)

and the UNITED STATES AIR FORCE

It is the purpose of this Memorandum of Understanding to establish guidelines to facilitate the solicitation, negotiation and placement of Department of Defense contracts for airlift services with air carriers certificated by the Civil Aeronautics Board ("CAB") under authority of the Federal Aviation Act of 1948, as amended, that are willing to participate in the Civil Reserve Air Fleet ("CRAF") program. The objectives of the CRAF Program are to augment the airlift capability of the Military Airlift Command ("MAC") and to assume a mobilization base of aircraft available to the Department of Defense for use in the event of any level of national emergency. MAC has managed the CRAF program utilizing CAB established rates for many years; however, the recently announced intention of the CAB to discontinue establishing minimum rates for Department of Defense airlift service contracts necessitates the development of new guidelines for use in managing the CRAF program.

By joint agreement on December 15, 1951, the Secretaries of Commerce and Defense established the CRAF program to augment military airlift capability during formally declared national emergencies. In response to Executive Order 10999, February 20, 1962, 27 F.R. 1527, which directed the Secretary of Commerce to

prepare national emergency plans designed to develop a state of readiness with respect to all degrees of national emergency, the CRAF program was expanded. On August 8, 1963, in a Memorandum of Understanding the Secretaries of Commerce and Defense jointly recognized "the requirement for incremental activation of the CRAF to meet varying defense emergency needs for the civil airlift augmentation to the military airlift capability" and directed a change in the CRAF program to reflect this requirement. To meet this requirement, the award of Department of Defense airlift service contracts has been structured to insure that a mobilization base of aircraft capable of responding to any level of defense emergency will be available to the Department of Defense. (Since 1961, the Department of Transportation has been created and the transportation functions of the Department of Commerce have been transferred to it. Also, E.O. 10999 has been revoked and its provisions have been incorporated into E.O. 11490, October 30, 1969, 34 F.R. 17567, which consolidates the assignment of emergency preparedness functions to the various departments and agencies.)

DOD Directive 5160.2 17 October 1973, establishes a Single Manager Assignment for Airlift Service within the Department of Defense and designates the Secretary of the Air Force as the Single Manager. The Directive requires that the Secretary establish and organize a Single Manager Operating Agency for Airlift Service and designate a general officer to direct the operations of the Agency as its Executive Director. MAC has been designated the Single Manager Operating Agency for Airlift Service. One of

MAC's functions as Single Manager Operating Agency is to augment the airlift capacity of the Agency as required to meet requirements through the use of commercial airlift service in a manner which will contribute to the sound economic development of an increased modern civil airlift capacity and will enhance the ability of civil carriers to operate with maximum effectiveness in support of the military forces in time of war. For many years MAC has accomplished this through the negotiation and award of DOD airlift-service contracts to U.S. air carriers which own or otherwise control aircraft suitable for allocation to the CRAF at CAB established minimum rates in a manner consistent with the objectives of the CRAF program.

Because the CAB has announced its intention to discontinue establishing rates for DOD airlift service contracts, MAC must now devise a means of pricing these contracts that produces fair and reasonable rates and preserves the mobilization base. The parties to the Memorandum of Understanding agree that the CAB methodology by which minimum rates for DOD airlift service contracts were established was an effective means of establishing fair and reasonable rates and furthering the objectives of the CRAF program; therefore, the parties agree to the continued use of the CAB-established methodology, to the extent reasonably practicable, in their negotiation of rates for future DOD airlift service contracts. In furtherance of this agreement and as a condition of its continued participation in the CRAF program, (carrier) agrees to furnish MAC with the financial and operational information which MAC requests, and MAC agrees to conduct an

annual review of this information and to negotiate with the (carrier) to determine (carrier's) projected costs that would properly be allocable to any future DOD airlift service contract. MAC further agrees to use cost information derived through the negotiation with (carrier) and the CAB-established methodology to determine an appropriate, uniform rate for pricing DOD airlift service contracts. If issues arise during this process which cannot be resolved by negotiation, MAC and (carrier) also agree that the issues shall be submitted to the Secretary of the Air Force (or, pursuant to a Secretarial delegation, to an Assistant Secretary or the Armed Services Board of Contract Appeals) for resolution and that the Secretary's (or the Secretary's delegatee's) decision will bind both parties.

This MOU will be effective for a period of five years. Either party may terminate this MOU by giving the other party notice of its intention to terminate within 90 days after October 1st in any year included in the five year period.

MAC will continue its historic practice of dividing the military peacetime airlift among carriers based upon their contributions to the three stages of potential CRAF emergencies-- peacetime committed expansion, defense airlift emergencies declared by the Secretary of Defense, and national emergency declared by the President or the Congress of the United States. As in the past, carrier participation in MAC Airlift Program will be wholly voluntary. Any properly certificated carrier may participate in the CRAF program if it offers aircraft useful to CRAF, agrees to the conditions of this Memorandum and executes a standard form MAC contract.

The parties understand that this Memorandum of Understanding imposes no financial obligation upon either party. The placement and pricing of DOD airlift service contracts and (carrier's) commitment of aircraft to the CRAF program will be accomplished by the formal award of the airlift service contracts after solicitation and negotiation in compliance with the DAR.

(Carrier)

by

United States Air Force

by

CINCMAC, Director of Single
Manager Operating Agency for
Airlift Services

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